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10/690,533	10/23/2003	Fabio Longoni	60279.00062	6372

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EXAMINER	
MAIS, MARK A	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/690,533	LONGONI ET AL.	
	Examiner	Art Unit	
	Mark A. Mais	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/23/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

2. The information disclosure statement (IDS) was filed on October 23, 2003. The submission is in compliance with the provisions of 37 C.F.R. 1.97. According, the examiner considered the IDS.

Specification

3. The abstract of the disclosure is objected to because it contains the comment "(Figure 4)". Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claims 1-26 are objected to because of the following informalities: they recite "characterised". Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Lucidarme et al. (USP 7,123,910).

7. With regard to claim 1, Lucidarme et al. discloses a method for implementing a signaling bearer connection in a distributed radio access network, characterized in that the method comprises the steps of:

creating a first interface instance (Iu, Iur) **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]** between an interworking unit (IWU) **[Figs. 5-8, e.g., any one of IWUs 32, 42, or 46]** and at least one of the networks selected from a group of networks comprising a core network (CN) **[Figs. 5-8, Core Network 70]** and a neighboring radio access network (RAN) **[Figs. 5-8; networks 30, 40, 50, and 60]**,

creating a second interface instance (Iu', Iur') between said interworking unit and a set of base stations (IP BTS) **[just as an interface is created for connections away from the radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations) such as between the RNC and the IWU, col. 10, lines 24-39; thus, the reverse is also true—between the IWU and the RNC, col. 13, lines 4-14]**,

assigning temporary identifier information to user equipment (UE) that has a connection to a base station (IP BTS) **[temporary identifiers are initially required to identify the mobile terminal, col. 12, line 61 to col. 13, line 3]**, and

mapping of the signaling traffic between said first and said second interface instances in said interworking unit, said mapping assigning signaling traffic from said first interface instance to said second interface instance based on said temporary identifier information **[at handoff, paging messages are tunneled to the IWU; then the IWU generates the required signaling on the local network, col. 10, lines 61-65; thus, the reverse is also true—between the IWU and the SGSN (and then to the RNC), col. 13, lines 4-14; temporary identifiers are initially required to identify the mobile terminal, col. 12, line 61 to col. 13, line 3]**.

8. With regard to claim 2, Lucidarme et al. discloses creating a signaling bearer connection for a user equipment (UE) through said first and second instances (Iu, Iur; Iu', Iur') **[Figs. 6 and 8, RAB assignment request (Fig. 6) and RAB assignment (Fig. 8); the reverse direction is also true, col. 13, lines 4-14]**.

9. With regard to claim 3, Lucidarme et al. discloses translating a transport address from the form used in said first interface instance (Iu, Iur) to the form used in said second interface instance (Iu', Iur') **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

10. With regard to claim 4, Lucidarme et al. discloses translating a transport address from the form used in said second interface instance (Iu', Iur') to the form used in said first interface instance (Iu, Iur) **[a tunnel is formed from the SGSN to the IWU, col. 10, lines 44-47; the reverse is also true—from the IWU, to the SGSN, and then the RNC, col. 13, lines 4-14]**.

11. With regard to claim 5, Lucidarme et al. discloses translating a signaling protocol of said first interface instance (Iu, Iur) to a signaling protocol of said second interface instance (Iu', Iur') **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

12. With regard to claim 6, Lucidarme et al. discloses translating a signaling protocol of said second interface instance (Iu', Iur') to a signaling protocol of said first interface instance (Iu, Iur) **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

13. With regard to claim 7, Lucidarme et al. discloses transmitting said signaling traffic transparently through said interworking unit between said first and second instances (Iu, Iur; Iu', Iur') **[IWUs provides transparency by being network elements in each of their respective networks and translating traffic from the common SGSN, col. 7, lines 40-60; especially if the SGSN is connected directly to the IWUs, col. 7, lines 62-64]**.

14. With regard to claim 8, Lucidarme et al. discloses composing said identifier information in a three-part form wherein the first part identifies said interworking unit (IWU), the second part identifies said base station (1P BTS) and the third part identifies said user equipment (UE) **[for a handover request from a specific RNC (thus, with the base station address), the SGSN transmits the handover request to the mobile terminal (mobile address is necessary for handover) by sending it to the IWU in the proper network (known IWU address), col. 10, lines 24-39; the reverse direction is also true, col. 13, lines 4-14]**.

15. With regard to claim 9, Lucidarme et al. discloses assigning a unique address to said interworking unit (IWU), and addressing said set of base stations (IP BTS), which has been connected to said interworking unit (IWU) with said unique address **[for a handover request from a specific RNC (thus, with the base station address), the SGSN transmits the handover request to the mobile terminal (mobile identifier is necessary for handover) by sending it to the IWU in the proper network (known IWU address), col. 10, lines 24-39; the reverse direction is also true, col. 13, lines 4-14]**.

16. With regard to claim 10, Lucidarme et al. discloses controlling user plane traffic by said interworking unit (IWU) **[the IWU controls the traffic from the mobile and even acts as a gateway for the user traffic, col. 7, lines 40-58]**.

17. With regard to claim 11, Lucidarme et al. discloses a system for implementing a distributed radio access network comprising

a set of base stations (IP BTS) **[Figs. 5-8, radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations)]**, and

at least one of the following networks: a core network (CN) **[Figs. 5-8, Core Network 70]**, and a neighboring radio access network (RAN) **[Figs. 5-8; networks 30, 40, 50, and 60]**, characterized in that said system further comprises:

an interworking unit (IWU) **[Figs. 5-8, e.g., any one of IWUs 32, 42, or 46]** for connecting said core network (CN) to said set of base stations (IP BTS) and to at least one of

said networks **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]**, said interworking unit comprising:

a first interface instance (Iu, Iur) between said interworking unit and at least one of said networks **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]**,

a second interface instance (Iu', Iur') between said interworking unit a set of base stations (IP BTS) **[just as an interface is created for connections away from the radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations) such as between the RNC and the IWU, col. 10, lines 24-39; thus, the reverse is also true—between the IWU and the RNC, col. 13, lines 4-14]**, and

a mapping unit (MU) for mapping the signaling traffic between said first and said second interface instances, said mapping assigning signaling traffic from said first interface instance to said second interface instance **[at handoff, paging messages are tunneled to the IWU; then the IWU generates the required signaling on the local network, col. 10, lines 61-65; thus, the reverse is also true—between the IWU and the SGSN (and then to the RNC), col. 13, lines 4-14]** based on temporary identifier information associated with a user equipment **[temporary identifiers are initially required to identify the mobile terminal, col. 12, line 61 to col. 13, line 3]**.

18. With regard to claim 12, Lucidarme et al. discloses that said interworking unit (IWU) is implemented in a radio access network server (RNAS) **[Figs. 5-8, e.g., interpreted as the combination of Bluetooth/BLUEPAC 40 and IWU 42]**.

19. With regard to claim 13, Lucidarme et al. discloses that radio access network server (RNAS) **[Figs. 5-8, e.g., interpreted as the combination of Bluetooth/BLUEPAC 40 and IWU 42]** controls the functions of radio access network gateway (RNGW) and circuit switched gateway (CSGW) **[determines whether to go to SGSN (packet-switched)—thus it must also necessarily determine if it must go to an MSC (circuit-switched), col. 7, lines 40-60]**.

20. With regard to claim 14, Lucidarme et al. discloses that said interworking unit (IWU) is connected to a set of base stations (IP BTS), and that said set of base stations (IP BTS) is addressed as one logical interworking unit (IWU) **[for a handover request from a specific RNC (thus, with the base station address), the SGSN transmits the handover request to the mobile terminal (mobile identifier is necessary for handover) by sending it to the IWU in the proper network (known IWU address), col. 10, lines 24-39; the reverse direction is also true, col. 13, lines 4-14; thus, it terminates at one network address (IWU address) before appropriate translation to the mobile terminals]**.

21. With regard to claim 15, Lucidarme et al. discloses that said interworking unit (IWU) is assigned a unique network address for addressing said set of base stations (IP BTS) and that the signaling connection is terminated in said interworking unit (IWU) **[for a handover request**

from a specific RNC (thus, with the base station address), the SGSN transmits the handover request to the mobile terminal (mobile identifier is necessary for handover) by sending it to the IWU in the proper network (known IWU address), col. 10, lines 24-39; the reverse direction is also true, col. 13, lines 4-14; thus, it terminates at one network address (IWU address) before appropriate translation to the mobile terminals].

22. With regard to claim 16, Lucidarme et al. discloses that said interworking unit (IWU) further comprises a transport address entity (TAE) for translating the transport addresses from the form used in said first interface instance (Iu, Iur) to the form used in said second interface instance (Iu', Iur'), and vice versa **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

23. With regard to claim 17, Lucidarme et al. discloses that said interworking unit (IWU) further comprises a protocol entity (PE) for translating the protocols of said first interface instance (Iu, Iur) to the protocols of said second interface instance (Iu', Iur'), and vice versa **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

24. With regard to claim 18, Lucidarme et al. discloses that said base station (IP BTS) is equipped with radio access control equipment **[Figs. 5-8, radio network access controller**

(RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations)].

25. With regard to claim 19, Lucidarme et al. discloses an Interworking unit **[Figs. 5-8, e.g., any one of IWUs 32, 42, or 46]** connected to at least one of the following networks: a core network (CN) **[Figs. 5-8, Core Network 70]**, and a neighboring radio access network (RAN) **[Figs. 5-8; networks 30, 40, 50, and 60]**, and to a set of base stations (IP BTS) **[Figs. 5-8, radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations)]** in a distributed radio access network, characterized in that said interworking unit (IWU)comprises:

a first interface instance (Iu, Iur) **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]** between said interworking unit **[Figs. 5-8, e.g., any one of IWUs 32, 42, or 46]** and at least one of said networks **[Figs. 5-8; networks 30, 40, 50, and 60]**,

a second interface instance (Iu', Iur') between said interworking unit and a set base stations (IP BTS) which has been equipped with radio access control equipment **[just as an interface is created for connections away from the radio network access controller (RNC) (interpreted as a base station—HIPERLAN 30 and BLUEPAC 40 are also interpreted as base stations) such as between the RNC and the IWU, col. 10, lines 24-39; thus, the reverse is also true—between the IWU and the RNC, col. 13, lines 4-14]**, and

a mapping unit (MU) for mapping the signaling traffic between said first and said second interface instances, said mapping assigning signaling traffic from said first interface instance to

said second interface instance based on temporary identifier information associated with a user equipment, whereupon said interworking unit functions as a logical radio network controller **[at handoff, paging messages are tunneled to the IWU; then the IWU generates the required signaling on the local network, col. 10, lines 61-65; thus, the reverse is also true—between the IWU and the SGSN (and then to the RNC), col. 13, lines 4-14; temporary identifiers are initially required to identify the mobile terminal, col. 12, line 61 to col. 13, line 3]**.

26. With regard to claim 20, Lucidarme et al. discloses that a first interface instance (Iu, Iur) is created between said interworking unit (IWU) and said core network (CN) **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44]**.

27. With regard to claim 21, Lucidarme et al. discloses that a first interface instance (Iu, Iur) is created between said interworking unit (IWU) and a neighboring radio network controller (RNC) **[Figs. 5-8, e.g., between Bluetooth 40 and IWU 42]**.

28. With regard to claim 22, Lucidarme et al. discloses that a first interface instance (Iu, Iur) is created between said interworking unit (IWU) and a neighboring base station controller (BSC) **[Figs. 5-8, e.g., between BLUEPAC 40 and IWU 42]**.

29. With regard to claim 23, Lucidarme et al. discloses that a second interface instance (Iu', Iur')

is created between said interworking unit and a set base stations (IP BTS) **[Figs. 5-8, e.g., between multiple HIPERLANs 30]**.

30. With regard to claim 24, Lucidarme et al. discloses that said first and second interface instances (Iu, Iur; Iu', Iur') are terminated in said interworking unit (IWU) **[the communication from a mobile station goes from IWU to SGSN 74 of core network 70; SGSN handles all packet-switched data from the IWUs, col. 7, lines 40-44; Figs. 5-8, e.g., between BLUEPAC 40 and IWU 42]**.

31. With regard to claim 25, Lucidarme et al. discloses that said interworking unit (IWU) further comprises a transport address entity (TAE) for translating the transport addresses from the form used in said first interface instance (Iu, Iur) to the form used in said second interface instance (Iu', Iur'), and vice versa **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

32. With regard to claim 26, Lucidarme et al. discloses said interworking unit (IWU) further comprises a protocol entity (PE) for translating the protocols of said first interface instance (Iu, Iur) to the protocols of said second interface instance (Iu', Iur'), and vice versa **[translating transport address from the Home Location Register (HLR) to the IWU (and appropriate translation of protocols), col. 10, lines 44-65; the reverse direction is also true, col. 13, lines 4-14]**.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Parmar et al. (USP 6,725,039), Mobile Telecommunications System.

(b) Rasanen et al. (USP 6,795,437), Arrangement for interconnecting communications networks.

(c) Kularatna et al. (USP 6,904,034), Method and system for communicating data between a mobile communications architecture and a packet switched architecture, each utilizing a different mode of communication.

(d) Cramby et al. (USP 7,020,477), Paging in communication systems.

(e) Suvanen (USP 7,072,358), Transmission and interconnection method.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is 572-272-3138. The examiner can normally be reached on M-Th 5am-4pm.

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAM
May 21, 2007

6/11/07

WING CHAN
SUPERVISORY PATENT EXAMINER